

AIR DEHYDRATION MEMBRANE

ABSTRACT OF THE DISCLOSURE

An air dehydration membrane is made of a hydrophilic polymer having a permeability for water vapor which is greater than its permeability for air, and having low selectivity between oxygen and nitrogen. The membrane has a hydrophilic coating, which itself may be a polymer. The coating does not affect the selectivity of the coated membrane with respect to oxygen and nitrogen, but does increase selectivity of the membrane with respect to water vapor. Preferred materials for the membrane are polysulfone and poly ether sulfone. Preferred materials for the coating are poly vinyl alcohol and Triton X-100. The membranes are made at low cost, and can outperform existing commercial membranes in either volumetric productivity or product recovery.